

ABSTRACT

1
2 A method and apparatus for delivering a
3 medicine to a patient via the patient's respiratory
4 system with control and efficiency. A nebulization
5 catheter is positioned in the patient's respiratory
6 system so that a distal end of the nebulization catheter
7 is in the respiratory system and a proximal end is
8 outside the body. In a first aspect, the nebulization
9 catheter may be used in conjunction with an endotracheal
10 tube and preferably is removable from the endotracheal
11 tube. The nebulization catheter conveys medicine in
12 liquid form to the distal end at which location the
13 medicine is nebulized by a pressurized gas or other
14 nebulizing mechanism. The nebulized medicine is conveyed
15 to the patient's lungs by the patient's respiration which
16 may be assisted by a ventilator. By producing the
17 aerosol of the liquid medicine at a location inside the
18 patient's respiratory system, the nebulizing catheter
19 provides for increased efficiency and control of the
20 dosage of medicine being delivered. In further aspects
21 of the nebulizing catheter apparatus and method,
22 alternative tip constructions, flow pulsation patterns,
23 centering devices, sensing devices, and aspiration
24 features afford greater efficiency and control of
25 aerosolized medicine dosage delivery.